



## Reducing Particulate Matter Emissions from On-Road Heavy Duty Diesel- Fueled Vehicles Owned Or Operated By Public Agencies And Utilities



California Environmental Protection Agency  
AIR RESOURCES BOARD

## Agenda

### 9:00 Fleet Rule for Public Agencies & Utilities

- Background
- Regulation Overview
- Calculating BACT Compliance
- Compliance Extensions
- Record Keeping and Labels

### 11:00 Accomplishing BACT

- ARB's Verification Program
- Tools for Successful Installations

### 1:00 Funding Opportunities

- Carl Moyer Program

### 12:00 to 5:00 Technology and Funding Fair

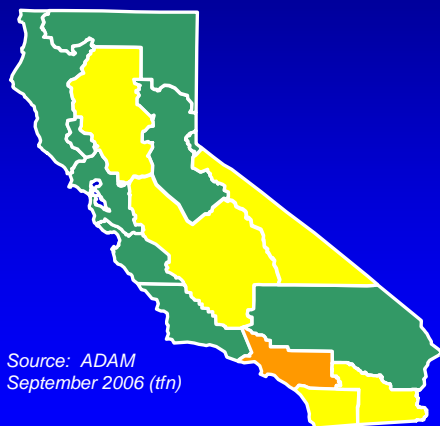
Meet one-on-one with providers of Diesel Emission Control  
Strategies and Local Incentive Funding

## Background

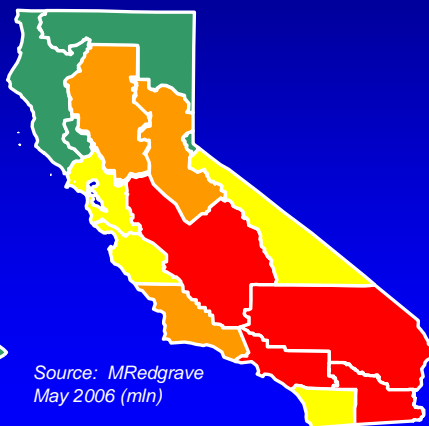
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### **Number of State PM10 and Ozone Exceedance Days Based on 2005 Monitoring Data**

**Days Over State 24-Hour  
PM10 Standard**



**Days Over State 8-Hour  
Ozone Standard**



0-5 Days

6-50 Days

50-100 Days

>100 Days

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## Significant Health Impacts Attributed to Diesel PM

- 2,900 premature deaths compared to 3,700 car accident deaths and 2,000 homicides in 2001



- 2,500 chronic bronchitis cases
- 240,000 asthma attacks and respiratory symptoms
- 3,600 hospital admissions
- 600,000 lost work days
- 3.2 million minor restricted activity days

## Diesel Risk Reduction Plan

- **Adopted 2000**
  - 75 percent risk reduction by 2010
  - 85 percent risk reduction by 2020
- **Multiple Strategies:**
  - Stringent new engine standards
  - Cleaner diesel fuel (<15 ppm sulfur)
  - Ensure in-use emissions performance
  - Aggressive reductions from in-use engines

## Why Reduce In-use Diesel Emissions?

- Diesel Engines are Long Lived
- New Engine Standards Offer Long Term Reductions
- In-use Emission Rules Provide Near-Term Reductions
- Control Technology is Available

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## Adopted In-Use Regulations

12 Regulations Adopted

2002 - 2006

## Future In-Use Regulations

- Harbor Craft
- Clean Fuel for Ocean Vessels
- Off-Road Equipment
- On-Road Privately Owned Fleets
- Agricultural Off-Road Equipment

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## Fleet Rule For Public Agencies and Utilities

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## Regulatory Overview

- Approved by ARB December 8, 2005 with modifications made available to the public for a 15-day comment period that ended June 24, 2006.
- Final regulation submitted to the Office of Administrative Law on October 20, 2006
  - Sections 2022 and 2022.1,  
Title 13, California Code of Regulations

[www.arb.ca.gov/regact/dpmcm05/dpmcm05.htm](http://www.arb.ca.gov/regact/dpmcm05/dpmcm05.htm)

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## Purpose and Definitions of Diesel Particulate Control Measures

- **Section 2020 Definitions**
  - Alternative fuel
  - Heavy-duty pilot ignition engine
  - Municipality
  - Verified
  - and others
- **Used in All Fleet Rules**
  - 2021: Solid Waste Collection Vehicles
  - 2022: Public Agencies and Utilities
  - 2023: Public Transit Agencies

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## Scope and Applicability

- Vehicles owned, leased, or operated by a municipality or utility
- Diesel vehicles over 14,000 GVWR
- Medium heavy-duty and heavy heavy-duty engines
- 1960 to 2006 model-year engines

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## What is a Municipality?

- Defined in Title 13, section 2020(b)
  - A city, county, city and county, special district, or a public agency of the United States of America or the State of California, any department, division, public corporation, or public agency of this State or the United States, or two or more entities acting jointly, or the duly constituted body of an Indian reservation or rancheria

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## What is a Utility?

- Defined in Title 13, section 2022(b)(7)
  - A utility is a privately owned company that provides the same or similar services for water, natural gas, or electricity as a public utility operated by a municipality

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## Vehicles Exempt From Rule

- Emergency vehicles  
(California Vehicle Code, section 27156.2)
- Military tactical support vehicles  
(Title 13, California Code of Regulations, section 1905)
- Off-road vehicles  
(Title 13, California Code of Regulations, sections 2401, 2421, 2411, and 2432)
- School buses (vehicle code 545)
- Solid waste collection vehicles and public transit buses

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## On-Road



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## Off-Road



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## Vehicles Not Exempt From Rule

- **School district vehicles**
  - not including school buses
- **Shuttles**
  - airports, colleges and universities
- **Solid waste transfer truck**
  - operated by municipality

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## Major Elements of the Fleet Rule for Public Agencies and Utilities

- Apply BACT to each engine in engine model year group
- Follow specific implementation schedule based on engine model-year
- Keep records for and label each vehicle
- Remain in compliance

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## Vehicles Exempt from BACT

- Low usage vehicles - record keeping required
- Low-population county, low usage vehicles - record keeping required
- Dedicated snow removal vehicles
  - Dump trucks used in snow removal are NOT considered snow removal equipment

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## Low Usage Vehicles and Low-Population Low Usage Vehicles

- Low usage vehicles
  - Less than 1,000 miles per year
  - Less than 50 hours per year
- Low-population county low usage vehicles
  - Less than 3,000 miles per year
  - Less than 150 hours per year
  - May exclude snow removal mileage or hours
- 5-year "rolling" annual average

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## Definition of “Rolling Average”

- A rolling calendar year is defined as the 12 months immediately preceding the current date.
- The five-year rolling average is based on the mileage or engine-hours recorded for the rolling five year period ending with the current date.

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## Dedicated Snow Removal Vehicle

- Permanently affixed snow removal equipment
  - For example, a snow blower, or auger
- Operated exclusively to perform snow removal operations

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## Dedicated Snow Removal Vehicle



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## Best Available Control Technology (BACT)

- Engine certified to 0.01 g/bhp-hr PM standard (2007 engine) or
- Engine certified to 0.10 g/bhp-hr PM and retrofit with highest level verified diesel emission control strategy (DECS) or
- Alternative-fuel, gasoline, or heavy-duty pilot ignition engine certified to lowest optional PM standard or
- Existing engine retrofit with highest level verified DECS

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## Apply Highest Level DECS

- Level 3 DECS
- Provide explanation if Level 2 or Level 1 DECS is used
- Limits on use of Level 1
  - section 2022.1(e)(4)

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## Limits on Use of Level 1 DECS

- Group 1 engines
  - Level 1 allowed only on fleets located in low population counties or granted low population county status
- Group 2 engines
  - Ten-year limit on use of Level 1 DECS
  - Replacement must be higher than Level 1
  - Exception for low population counties
- Group 3 engines
  - Five-year limit on use of Level 1 DECS
  - Replacement must be higher than Level 1
  - Exception for low population counties

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## Retired Vehicle

- **Section 2022(b)(5)**
  - Sold outside of California
  - Meets BACT requirement if transferred to a fleet within California
  - Engine dismantled for scrap
  - Converted for use as a low usage or low-population low usage vehicle
  - Keep records to document retirement

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## Implementation Schedule for All Fleets

Group	Engine Model-Years	Percentage of Group to use BACT	Compliance Deadline as of December 31
1 <sup>a</sup>	1960 - 1987	20%	2007
		60%	2009
		100%	2011
2	1988 - 2002	20%	2007
		60%	2009
		100%	2011
3	2003 – 2006 (Includes all dual-fuel and bi-fuel engines)	50% 100%	2009 2010

<sup>a</sup> An owner may not use a Level 1 technology as BACT on Group 1 engines

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## Low Population Counties (population less than 125,000, as of July 1, 2005)

- Alpine
- Amador
- Calaveras
- Colusa
- Del Norte
- Glenn
- Inyo
- Lake
- Lassen
- Mariposa
- Mendocino
- Modoc
- Mono
- Nevada
- Plumas
- San Benito
- Sierra
- Siskiyou
- Sutter
- Tehama
- Trinity
- Tuolumne
- Yuba

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## Implementation Schedule for Low Population Counties

Group	Engine Model-Years	BACT %	Deadline as of December 31 <sup>st</sup>
1	1960 - 1987	20%	2009
		40%	2011
		60%	2013
		80%	2015
		100%	2017
2	1988 - 2002	20%	2008
		40%	2010
		60%	2012
		80%	2014
		100%	2016
3	2003 – 2006 (Includes all dual fuel and bi-fuel engines)	20%	2011
		40%	2012
		60%	2013
		80%	2014
		100%	2015

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## Accelerated Turnover Option (Low Population County)

- **Schedule - section 2022.1(c)(3)**
  - Replace all 1993 and older MY engines with 1994 and newer MY engines by 2020
  - Apply BACT to 1994 to 2006 engines by 2025
- **Application - section 2022.1(d)(6)**
  - Available to low-population counties and fleets granted low-population county status
  - Submit letter of intent to Executive Officer by July 31, 2008

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## Qualifying for Low-Population County Status

- **Section 2022.1(c)(4)**
  - Fleet revenue is not based on special district assessments or fees
  - Fleet located in a nonurbanized area with a total population less than 50,000
  - County fleet option
    - County population less than 325,000 as of July 1, 2005
    - County population is less than 125,000 after subtracting the population of large cities
    - Vehicles do not operate within subtracted cities

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## Calculating BACT

- Section 2022.1(c)(5)
  - Provides the calculations for determining fleet size and number to be in compliance of BACT
  - Example provided
    - ♦  $\#Vehicles_{by\ group}$
    - ♦  $\#MUV_{by\ group} = \#Vehicles_{by\ group} + TotRetired_{by\ group}$
    - ♦  $TotVeh_{bygroup} = Group\%BACT_{bygroup} \times \#MUV_{bygroup}$
    - ♦  $TotAddComp_{bygroup}$   
 $= TotVeh_{bygroup} - TotBACT_{bygroup} - TotRetire_{bygroup}$
  - BACT Calculator

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## Compliance Extensions

- Section 2022.1(d)
  - 2022.1(d)(1) Early implementation
  - 2022.1(d)(2) No verified DECS available
  - 2022.1(d)(3) Dual-fuel or bi-fuel engine  
(Group 3 for all MY engines)
  - 2022.1(d)(4) Engine one year from retirement
  - 2022.1(d)(5) Experimental DECS experiment
  - 2022.1(d)(6) Accelerated turnover option  
(low-population county)

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## Diesel Emission Control Strategy Special Circumstances

- Section 2022.1 (e)
  - 2022.1(e)(1) Fuel strategy DECS
  - 2022.1(e)(2) DECS failure or damage
  - 2022.1(e)(3) Discontinuation of fuel verified as a DECS
  - 2022.1(e)(4) Limited use of Level 1 DECS

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## Maintain Records

- Section 2021.1(f) (1 through 3)
  - Individual records by vehicle
  - Kept centrally
  - Available for inspection by appointment
  - Vehicle labeling
    - ♦ Door jamb
    - ♦ Location known by driver
    - ♦ Durable and legible

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## Compliance Statement

- **Section 2022.1(f)(1)(K)**
  - Statement certifying that engines are in compliance as required
  - Start December 31 of 2007, renew each December 31 until December 31, 2012
  - Low-population counties continue reporting until 2018

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## Contractor Compliance Requirements

- **Section 2022.1 (g)**
  - Contracts with an effective date of December 31, 2007 or later
  - Contractor must comply with all federal, state, and local air pollution control laws and regulations applicable to the contractor

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## Non-Compliance

- **Section 2022.1(h)**
  - Violations may carry civil penalties as specified by state law
  - Failure to keep required vehicle records
    - may be subject to a \$100 fine for each day records are not kept
  - Failure to label vehicles
    - may be subject to a \$100 fine per vehicle for each day labels are not kept

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## Calculating BACT Compliance

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## Fleet Size for Compliance Implementation

- Compile records for each vehicle in the fleet
  - Example forms in the handout will be posted on ARB website
- Identify vehicles in the total fleet subject to the rule

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## Identify Your "Total Fleet"

- Defined in Section 2022(b)(6):
  - All on-road heavy-duty vehicles
  - 1960 to 2006 model-year medium heavy-duty and heavy heavy-duty engine
  - GVWR greater than 14,000 pounds
- Exclude from calculation
  - Low usage and low-population county, low usage vehicles (document mileage or hours)
  - Dedicated snow removal vehicles

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## Total Fleet by Engine Model-year Group

- Assign each vehicle in the total fleet to an engine model-year (MY) group

Group 1: 1960 - 1987

Group 2: 1988 - 2002

Group 3<sup>a</sup>: 2003 - 2006

<sup>a</sup> All bi-fuel and dual-fuel vehicles are Group 3

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## Vehicles in Total Fleet Subject to the Rule

- Count the number of vehicles in the total fleet in each model year group as of January 1 of each year that a compliance deadline is applicable
  - This is the number of vehicles in each engine model-year subject to the rule (#Vehicles<sub>by group</sub>)

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## Example Fleet as of January 1, 2007

Group	Engine Model-year (MY)	Jan 1, 2007 total fleet vehicles
1	1960 - 1987	20 <sup>a</sup>
2	1988 - 2002	130 <sup>a</sup>
3	2003 - 2006	50 <sup>a</sup>

- Total fleet = 200 vehicles
- Summarized from Report Forms
- <sup>a</sup> # Vehicles<sub>by group</sub>

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## BACT Calculator Handout (#Vehicles<sub>by group</sub>)

2. ENTER COMPLIANCE YEAR **2007**
3. ASSIGN EACH VEHICLE IN THE TOTAL FLEET TO AN ENGINE MODEL YEAR (MY) GROUP

The Jan 1 "total fleet" count for each model year group is	→	(#Vehicles <sub>by group</sub> )
Enter # of Group 1 engines in your total fleet	→	20
Enter # of Group 2 engines in your total fleet	→	130
Enter # of Group 3 engines in your total fleet	→	50

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## Fleet Size for Calculating BACT Compliance

- **January 1, 2007**
  - Total fleet count =  $\#Vehicles_{by\ group}$
- **For December 31, 2007 deadline**
  - Total fleet for calculating BACT =  $\#MUV_{by\ group}$

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## BACT Calculator Handout ( $\#MUV_{by\ group}$ )

4. CALCULATE  $MUV_{by\ group}$  for 2007 using Equation 1

$$\#Vehicles_{by\ group} + TotRetire_{by\ group} = \#MUV_{by\ group}$$

Note: Vehicles retired prior to January 1, 2007 are not counted

	( $TotRetire_{by\ group}$ )
Enter # of Group 1 engines retired since Jan 1, 2007 →	0
Enter # of Group 2 engines retired since Jan 1, 2007 →	0
Enter # of Group 3 engines retired since Jan 1, 2007 →	0

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## Total Fleet for Calculating BACT Compliance (December 31, 2007 Deadline)

Engine Model-Year Group	Total Fleet by Group January 1, 2007 (#Vehicles <sub>by group</sub> )	Total Engines Retired Since January 1, 2007 (TotRetire <sub>by group</sub> )	Total Fleet by Group for BACT Calculation December 31, 2007 (# MUV <sub>by group</sub> )
1	20	0	20
2	130	0	130
3	50	0	50

$$\#MUV_{by\ group} = \#Vehicles_{by\ group}$$

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## Calculating How Many Vehicles Must Comply by December 31, 2007?

- Example calculation for Group 2 engines

1) Total # vehicles for Group 2 calculation  
 $(\#MUV_{by\ group}) = 130$

2) % that must comply with BACT requirement  
 $(\%BACT_{by\ group}) = 20\%$

3) # that must comply with BACT requirement  
 $(TotVeh_{by\ group}) = 26$

$$\begin{array}{rcccl} \#MUV_{by\ group} & \times & \%BACT_{by\ group} & = & TotVeh_{by\ group} \\ 130 & \times & 0.20 & = & 26 \end{array}$$

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## Total Number of Vehicles That Must Comply by December 31, 2007

Engine Model- Year Group	Total Fleet by Group (# MUV <sub>by group</sub> )	BACT Required by Dec 31, 2007	
		%BACT <sub>by group</sub>	TotVeh <sub>by group</sub>
1	20	20%	4
2	130	20%	26
3	50	----	----

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## Compliance Options Available to Example Fleet

- Retrofit with highest level diesel emission control strategy (DECS)
- Repower with 0.01 g/bhp-hr engine
- Repower with 0.10 g/bhp-hr engine + highest level DECS
- Repower + alternative fuel
- Repower + gasoline
- Retirement of vehicle/engine
- Compliance extension (example: no verified DECS)

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## Compliance Plan for December 31, 2007 Deadline

COMPLIANCE STRATEGIES	COMPLIANCE PLAN		
	Engine MY Group		
	Group 1	Group 2	Group 3
# of BACT DECS	0	20	0
# Repowers (0.1g/bhp-hr) + DECS	0	5	0
# Repowers (0.01g/bhp-hr)	0	0	0
# Alt Fuel Engines	0	0	0
# Gasoline Engines	0	0	0
# Retired	1	1	0
# Using Fuel Strategy	0	0	0
# Granted Extensions	3	0	0
TOTAL TOWARDS COMPLIANCE	4	26	0
BACT or RETIRED NEEDED	4	26	0

## New Fleet Size after December 31, 2007 Deadline

Engine MY Group	Total fleet by group (# MUV <sub>by group</sub> )	Retire	New fleet size
1	20	1	19
2	130	1	129
3	50	----	50

## Retired Vehicle

- **Section 2022(b)(5)**
  - Sold outside of California
  - Meets BACT requirement if transferred to a fleet within California
  - Engine dismantled for scrap
  - Converted for use as a low usage or low-population low usage vehicle
  - Keep records to document retirement

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## Fleet Changes in 2008

- Retired one additional Group 2 engine
- Purchased 2 vehicles (2007 MY chassis)
  - One 2006 MY engine
  - One 2007 MY engine

### Note:

- **Group 2 total fleet is smaller**
  - Retired one additional engine
  - New 2007 MY engine not included in the total fleet
- **Group 3 total fleet is larger**
  - Purchase of vehicle with 2006 MY engine

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## Total Fleet as of January 1, 2009

Group	Total Fleet Jan 1, 2008	Fleet Changes in 2008	Total Fleet Jan 1, 2009
1	19	None	19
2	129	Retire 1 more vehicle Replace with 2007 MY engine	128
3	50	Purchase 2006 MY engine	51

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## BACT Calculator Handout

(#Vehicles<sub>by group</sub>)

- ENTER COMPLIANCE YEAR **2009**
- ASSIGN EACH VEHICLE IN THE TOTAL FLEET TO AN ENGINE MODEL YEAR (MY) GROUP

The Jan 1 "total fleet" count for each model year group is	→	(#Vehicles <sub>by group</sub> )
Enter # of Group 1 engines in your total fleet	→	19
Enter # of Group 2 engines in your total fleet	→	128
Enter # of Group 3 engines in your total fleet	→	51

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## Calculating Additional BACT Compliance December 31, 2009

- **January 1, 2009**
  - Total fleet count =  $\#Vehicles_{by\ group}$
- **For December 31, 2009 deadline**
  - Total fleet for calculating BACT =  $\#MUV_{by\ group}$

$$\#MUV_{by\ group} = \#Vehicles_{by\ group} + TotRetire_{by\ group}$$

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## BACT Calculator Handout ( $\#MUV_{by\ group}$ )

### 4. CALCULATE $MUV_{by\ group}$ using Equation 1

$$\#Vehicles_{by\ group} + TotRetire_{by\ group} = \#MUV_{by\ group}$$

Note: Vehicles retired prior to January 1, 2007 are not counted

	( $TotRetire_{by\ group}$ )
Enter # of Group 1 engines retired since Jan 1, 2007 →	1
Enter # of Group 2 engines retired since Jan 1, 2007 →	2
Enter # of Group 3 engines retired since Jan 1, 2007 →	0

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## Fleet for Calculating Additional BACT Compliance (December 31, 2009 Deadline)

Engine Model-Year Group	Total Fleet by Group January 1, 2009 (#Vehicles <sub>by group</sub> )	Total Engines Retired Since January 1, 2007 (TotRetire <sub>by group</sub> )	Total Fleet by Group for BACT Calculation December 31, 2009 (# MUV <sub>by group</sub> )
1	19	1	20
2	128	2	130
3	51	0	51

$$\#MUV_{by\ group} = \#Vehicles_{by\ group} + TotRetire_{by\ group}$$

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## How Many Additional Vehicles Must Comply by December 31, 2009?

Example calculation for Group 2 engines

Step 1: How many must comply by  
December 31, 2009 (*TotVeh<sub>by group</sub>*)

- 1) Total fleet vehicles for Group 2 calculation  
 $(\# MUV_{by\ group}) = 130$
- 2) % that must comply with BACT requirement  
 $(\% BACT_{by\ group}) = 60\%$
- 3) Total that must comply with BACT requirement  
 $(TotVeh_{by\ group}) = 78$

$\#MUV_{by\ group}$	$\times$	$\%BACT_{by\ group}$	$=$	$TotVeh_{by\ group}$
130	$\times$	0.60	$=$	78

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## How Many Additional Vehicles Must Comply by December 31, 2009 cont.?

Example calculation for Group 2 engines

Step 2: How many already count towards the December 31, 2009 BACT compliance?

4) Vehicles retired in previous years

$$(\text{TotRetire}_{\text{by group}}) = 2$$

5) Total fleet vehicles that already meet BACT

$$(\text{TotBACT}_{\text{by group}}) = 25$$

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## BACT Compliant or Retired as of January 1, 2007

CURRENTLY COMPLIANT			COMPLIANCE STRATEGIES
Engine MY Group			
Group 1	Group 2	Group 3	
0	20	0	# of BACT DECS
0	5	0	# Repowers (0.1g/bhp-hr) + DECS
0	0	0	# Repowers (0.01g/bhp-hr)
0	0	0	# Alt Fuel Engines
0	0	0	# Gasoline Engines
1	2	0	# Retired
0	0	0	# Using Fuel Strategy
0	0	0	# Granted Extensions
1	27	0	TOTAL TOWARDS COMPLIANCE

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## How Many Additional Vehicles Must Comply by December 31, 2009 cont.?

Example calculation for Group 2 engines

Step 3: How many additional vehicles must comply by December 31, 2009

6) Total that must comply with BACT requirement

$$(\#TotVeh_{by\ group}) = 78$$

7) Subtract vehicles retired in previous years

$$(TotRetire_{by\ group}) = 2$$

8) Subtract total fleet vehicles that already meet BACT

$$(TotBACT_{by\ group}) = 25$$

9) Additional vehicles to be brought into compliance

$$(TotAddComp_{by\ group}) = 51$$

$$TotVeh_{by\ group} - TotBACT_{by\ group} - TotRetire_{by\ group} = TotAddComp_{by\ group}$$

$$78 - 25 - 2 = 51$$

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## Compliance Plan for December 31, 2009 Deadline

COMPLIANCE STRATEGIES	COMPLIANCE PLAN		
	Engine MY Group		
	Group 1	Group 2	Group 3
# of BACT DECS	0	20	20
# Repowers (0.1g/bhp-hr) + DECS	4	20	0
# Repowers (0.01g/bhp-hr)	0	0	5
# Alt Fuel Engines	1	0	0
# Gasoline Engines	0	0	0
# Retired	3	11	1
# Using Fuel Strategy	0	0	0
# Granted Extensions	3	0	0
TOTAL TOWARDS COMPLIANCE	11	51	26
BACT or RETIRED NEEDED	11	51	26

## Compliance Extensions Provided

- Section 2022.1(d)
  - 2022.1(d)(1) Early Implementation
  - 2022.1(d)(2) No verified DECS available
  - 2022.1(d)(3) Dual-fuel or bi-fuel engine
  - 2022.1(d)(4) Engine one year from retirement
  - 2022.1(d)(5) Experimental DECS
  - 2022.1(d)(6) Accelerated turnover option (low-population county)

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## Implementation Schedule Extensions

## Early Implementation Schedule Requires Approval by the Executive Officer (section 2022.1(d)(1))

Engine MY Groups	Schedule	Extension <sup>1</sup>
Group 1 1960 - 1987	50% or more of Group 1 by December 31, 2007	Delay remaining Group 1 until July 1, 2012
Group 2 1988 - 2002	50% or more of Group 2 by December 31, 2007	Delay remaining Group 2 until July 1, 2012
Group 3 2003 - 2006	100% of Group 1 and Group 2 by December 31, 2008	Alternate schedule may be followed for Group 3 <ul style="list-style-type: none"> <li>• 20% by Dec. 31, 2009</li> <li>• 60% by Dec. 31, 2011</li> <li>• 100% by Dec. 31, 2012</li> </ul>

<sup>1</sup> Must apply to the Executive Officer by December 31, 2007

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## Advanced Technology Vehicles

- Section 2022.1(d)(1)(D)
  - Significant quantities of advanced technology vehicles
    - Meet or exceed MY 2007 or later standards
    - Significantly reduce greenhouse gases and petroleum use
  - Optional credits or extended implementation schedule for Groups 2 and 3
    - Proportionate to additional emissions benefits
  - Apply to Executive Officer for approval

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## Individual Vehicle Compliance Extensions

### No Verified DECS Available

- Section 2022.1(d)(2)
  - Two types of Extensions
    - ♦ **Blanket by ARB to all fleets**
      - one-year extension issued by EO ten months prior to deadline
      - Additional extensions may be issued annually through December 31, 2012 (2018 for low-population counties)
    - ♦ **Application by municipality or utility**

## No Verified DECS Available Municipality or Utility Application

- **Section 2022.1(d)(2)(B)**
  - Engine model year Groups 1 and 2.
  - Apply by July 31 until 2011  
(2017 for low-population counties)
  - Annual application until July 31, 2011 for Group 2
  - BACT applied to all other engines as required
  - Final compliance deadline is December 31, 2012 (2018 for low-population counties)

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## Dual-Fuel or Bi-Fuel Engine

- **Section 2022.1(d)(3)**
  - Engine model years Group 1 or Group 2
  - May delay implementation to the Group 3 deadlines

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## Engine Near Retirement

- **Section 2022.1(d)(4)**
  - Scheduled to be retired within one year of compliance deadline
  - BACT applied to all other engines as required
  - One-year compliance extension
  - Record keeping and labeling requirements

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## Experimental DECS

- **Section 2022.1(d)(5)**
  - 10% of total fleet or 20 vehicles, whichever is less
  - Experimental test plan
  - Maximum of two years duration for experiment
  - Vehicle must comply with BACT within six months of end of project
  - No projects after December 31, 2012
  - Record keeping and labeling requirements

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## Record Keeping and Labels

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### Municipality and Utility Record Keeping Requirements

- Fleet vehicle records
- Compliance statement
- Vehicle labeling

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## Fleet Vehicle Records

- Information on each vehicle
- Hard copy or computer records
  - Kept for each vehicle in total fleet
  - Beginning December 31, 2007
  - May be kept at a central location
- Provide for inspection by appointment at terminal
- Maintain records until no longer operated
  - Provide records to purchaser (remains with vehicle)

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## Vehicle Record Information

- A list by Vehicle identification number (VIN)
  - Engine manufacturer
  - Engine model year
  - Engine family name
  - Engine series
  - Vehicle Type
    - Future compliant, Compliant, Planned retirement, Low usage, Experimental

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## Compliant Vehicles

- **Additional Information - BACT used:**
  - Alternative fuel or gasoline strategy used  
BACT = fuel type in record
    - Must maintain most recent 2 years of purchase records
  - For each vehicle using a DECS:
    - DECS family name, serial number, manufacturer
    - DECS installation date
    - Verification Level
      - If not Level 3, justify use of Level 1 or Level 2
    - Maintenance records for each DECS

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## Low Usage Vehicle

- **Additional Information:**
  - Mileage or engine hours as of December 31 of each year beginning 2007
  - Records to document five-year mileage or engine hours as of December 31 of each year beginning in 2007
  - Engine used in power take off (PTO) or idling must keep hours

84

## Low-population County or Status

- **Additional information:**
  - Statement that vehicles do not provide service in urban areas
  - If following Accelerated Turnover Option
    - Date of engine repower for each vehicle

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## Retired Vehicle

- **Additional Information:**
  - Retirement date or anticipated date (section 2022.1(d)(4))
  - Once retired
    - Documentation of scrapped,
    - Documentation sold out of state, or
    - Statement of conversion to low usage

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## BACT Requirement for Sale in CA

- **Additional information:**
  - If vehicle is transferred to another fleet in California with BACT, it is counted as retired
    - Statement of compliance that vehicle meets BACT
    - DECS information

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## Experimental DECS

- **Additional information:**
  - Start and end dates of test plan
  - DECS manufacturer's name and contact information
  - Name and type of DECS
  - Targeted data to be generated

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## Statement of Compliance

- Statement certifying that engines are in compliance as required
- Beginning December 31, 2007, renew each December 31 through December 31, 2012
- Low population counties through 2018
- Agency name, address, and phone
- Signed by agency agent and dated

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## Example Compliance Statement

Public Agency or Utility Statement of Compliance	
*The Statement of compliance must meet with the requirements of Section 2022.1(f)(1)(K) and must include the following language:	
"The <u>Air Resources Board</u> vehicles at terminal ' <u>123456</u> ' are in compliance with title 13, California Code of Regulations, Section 2022.1"	
Fleet Owner's Name:	Air Resources Board
Business Address:	1001 I Street, Sacramento, CA 95814
Telephone Number:	916-324-6771
Signature of Responsible Party: _____	
Date Signed: _____	

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# Record Keeping Example Form

[illegible]

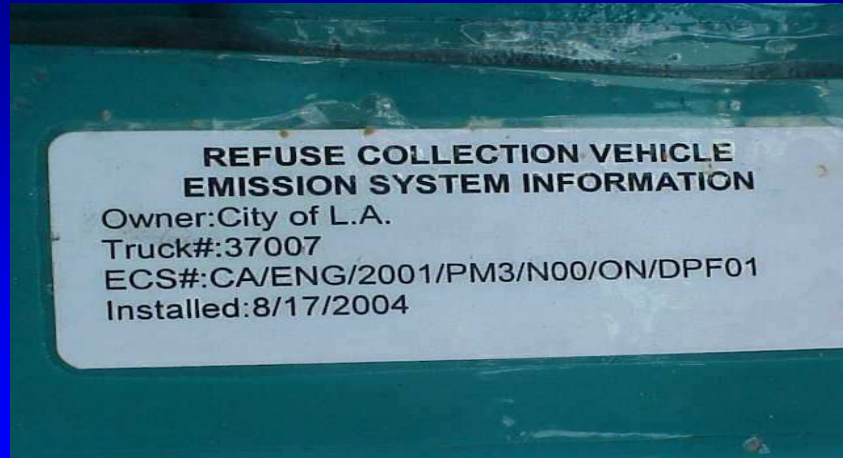
91

# Vehicle Label Requirements

- Install durable and legible label by December 31, 2007
- On driver door jamb or other readily accessible location known to the driver
- Types
  - Compliant
  - Future Compliant
  - Planned Retirement
  - Low usage
  - Experimental
  - Low-population county

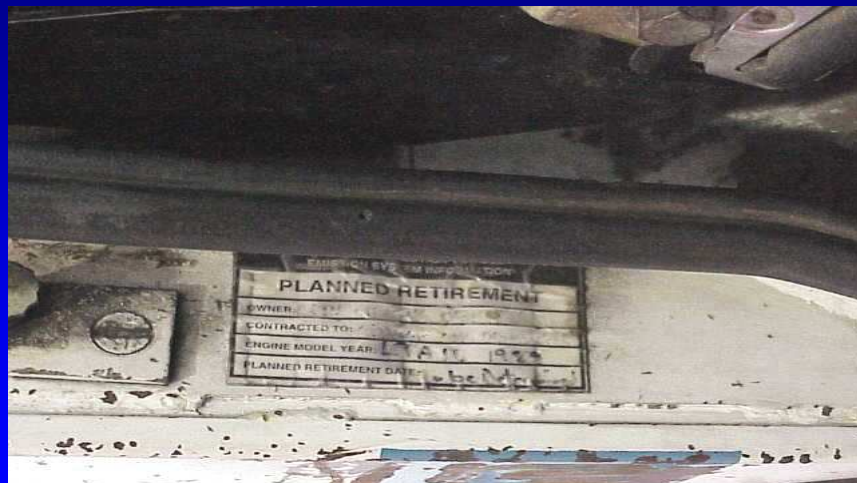
92

## Legible and Durable



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## NOT Legible and Durable



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## Compliant

- Owner or operator name
- Engine model year
- DECS family name
- Installation date

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### PUBLIC AGENCY OR UTILITY VEHICLE EMISSION SYSTEM INFORMATION

#### COMPLIANT

OWNER/OPERATOR:

EMISSION CONTROL STRATEGY FAMILY NAME:

ENGINE MODEL YEAR:

INSTALLATION DATE:

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## Future Compliant

- Owner or operator name
- Engine model year
- Planned compliance date
- State if following the accelerated turnover option
  - Low-population county or low-population county status

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### PUBLIC AGENCY OR UTILITY VEHICLE EMISSION SYSTEM INFORMATION

#### FUTURE COMPLIANT

OWNER/OPERATOR:

ENGINE MODEL YEAR:

PLANNED COMPLIANCE DATE:

ACCELERATED TURNOVER OPTION: YES ☐ NO ☐

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## Planned Retirement

- Owner or operator name
- Engine model year
- Planned retirement date

99

### **PUBLIC AGENCY OR UTILITY VEHICLE EMISSION SYSTEM INFORMATION**

#### **PLANNED RETIREMENT**

**OWNER/OPERATOR:****ENGINE MODEL YEAR:****PLANNED RETIREMENT DATE:**

100

## Low Usage Vehicle

- Owner or operator name
- Engine model year
- Designation as a low-usage vehicle
- Vehicle's mileage or hours as of December 31 of each year beginning in 2007

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### PUBLIC AGENCY OR UTILITY VEHICLE EMISSION SYSTEM INFORMATION

#### LOW USAGE

OWNER/OPERATOR:

ENGINE MODEL YEAR:

MILEAGE/HOURS AS OF December 31, 2007:

08		09		10	
11		12		13	

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## Experimental DECS

- Owner or operator name
- Engine model year
- Emission control strategy name
- Beginning date of test plan
- Ending date of test plan

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### PUBLIC AGENCY OR UTILITY VEHICLE EMISSION SYSTEM INFORMATION

#### EXPERIMENTAL EMISSION CONTROL STRATEGY

OWNER/OPERATOR:

ENGINE MODEL YEAR:

EMISSION CONTROL STRATEGY NAME:

BEGINNING DATE:

ENDING DATE:

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## Low-population County or Low-population County Status

- Owner or operator name
- Engine model year
- Terminal where vehicle is permanently housed

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### PUBLIC AGENCY OR UTILITY VEHICLE EMISSION SYSTEM INFORMATION

#### LOW-POPULATION COUNTY

OWNER/OPERATOR:

ENGINE MODEL YEAR:

TERMINAL:

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## Record Keeping Summary

- **Fleet vehicle records**
  - Available upon request
  - Stay with vehicle
- **Statement of compliance**
- **Vehicle labels**
  - Durable and legible
  - Known location on vehicle
  - Accurate vehicle type

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## Contact Information

**Fleet Rule for Public Agencies and Utilities**  
[www.arb.ca.gov/msprog/publicfleets/publicfleets.htm](http://www.arb.ca.gov/msprog/publicfleets/publicfleets.htm)

**Kathleen Mead, Manager**

Phone: (916) 324-9550

E-mail: [kmead@arb.ca.gov](mailto:kmead@arb.ca.gov)

**Gloria Lindner**

Phone: (916) 323-2803

E-mail: [glindner@arb.ca.gov](mailto:glindner@arb.ca.gov)

**Warren Hawkins**

Phone: (916) 324-6771

E-mail: [whawkins@arb.ca.gov](mailto:whawkins@arb.ca.gov)

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## Other Contact Information

### Diesel Programs

<http://www.arb.ca.gov/diesel/diesel.htm>

### Regulations in Development

Off-Road Equipment (In-Use) Control Measure

<http://arb.ca.gov/msprog/ordiesel/ordiesel.htm>

Private On-Road Vehicles (In-Use) Control

<http://arb.ca.gov/msprog/onrdiesel/onrdiesel.htm>

**Tony Brasil, Manager**

Phone: (916) 323-2927

E-mail: [abrasil@arb.ca.gov](mailto:abrasil@arb.ca.gov)

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## Questions ?



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